collection from Jamaica and Cuba. Unfortunately, neither of these collections have specific locality data. The labels do indicate, however, that this species was definitely introduced into those islands, but whether it is still living there is uncertain. When we consider that *lactea* normally ranges through the region of Gibraltar, a great cross-road in the commerce of the world, the potential passive distribution of this species becomes tremendous.

REMARKS ON SOME OF DR. PAUL BARTSCH'S EXPERIMENTS

BY HENRY VAN DER SCHALIE

In the recent report of Dr. Paul Bartsch at the Seventh Annual Meeting of the American Malacological Union, results on some experimental breeding of *Goniobasis* in cages placed at stations in the Potomac River were of considerable interest. These breeding experiments were virtually a failure due to unusual silting conditions. However, an unexpected discovery was made. To quote the article: "Greatly to the surprise of the experimenters in one of the cages specimens of *Anodonta cataracta* Say were found with eight annulations, one measuring 66.2 mm. in length, 40.0 mm. high and with a diameter of 19.3 mm. This would indicate that annulations must not be taken as an indication of year marks."

In this quotation it is clearly stated that "annulations must not be taken as an indication of year marks." If this is true we are faced with a major problem since much of the better work with mussels in the past has been based on methods which use annual rings in the determination of age. Since Dr. Bartsch has raised this question, it would be highly desirable for him to supply us with experimental data sufficient to disprove the work of Hessing, Rubbel, Coker, Isely, Chamberlain and others. Their investigations have clearly indicated that age in mussels can be determined by annual rings.

An analysis of Dr. Bartsch's work shows that there may be an explanation for the results he obtained. In the first place, his experimental work was not carefully checked since he visited his stations only once in ten months. Furthermore, he will learn, if

he considers some of the publications of men referred to above, that one must differentiate between annual rings and lesser growth-rests which are produced with a temporary cessation in growth due to unfavorable circumstances. In a species such as *Anodonta cataracta* Say, shell growth may be very rapid when the animal lives under favorable conditions. During such rapid growth, disturbances of the animal may be registered on the shell as growth-rests. If Dr. Bartsch is unable to interpret properly his experimental results, the burden of disproving earlier work rests with him.

A NEW SPECIES OF *POLYGYRA* FROM THE GREAT SMOKY MOUNTAINS, NORTH CAROLINA

BY ALLAN F. ARCHER

POLYGYRA (MESODON) JONESIANA, new species. Plate 10, fig. 6.

Description.—Shell rather small, imperforate, rather solid, subglobose, concave in the umbilical region, dull and faintly hirsute. Color light chestnut; nuclear whorl eroded, dirty white. Parietal lamella white; peristome white edged with a faint reddish brown. Whorls, 5¼, gradually increasing; gently convex; nuclear whorl nearly flat. Suture impressed throughout. Body whorl gently bulging behind the peristome; area immediately behind the peristome deeply impressed. Aperture oblique, lunate. Peristome rather narrow except in the basal area, reflected; edge of peristome rather sharp; surface of peristome dished and concave directly above the anal sinus; the rest of the surface convex. Outer denticle present in the form of a slight, rounded boss; basal denticle, a faint curve inwards towards the parietal wall, and nearly continuous with the thickened, undifferentiated rim of the basal peristome. Parietal lamella rather prominent, slightly curved, and robust; the proximal portion of the lamella much more elongated than the distal portion. The umbilical region covered by a broad callus, rather impressed. The nuclear whorl and the two succeeding whorls covered with faint, irregular, axial riblets. The fourth whorl and the body whorl covered with rather widely spaced axial riblets which tend to become faint below the periphery in the region just above the parietal callus. From about the third whorl onwards to the groove behind the peristome the shell covered with spirally disposed longitudinal pits surmounted by cuticular laminae; these laminae in a staggered arrangement. The entire surface of the peristome, parietal lamella,